



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,650	03/25/2004	Jean-Claude Gasquet	1948-4841	6110
27123	7590	05/18/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/808,650	Applicant(s) GASQUET ET AL.	
	Examiner Jason M. Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,8,10 and 17 is/are rejected.
- 7) ☒ Claim(s) 9 and 11-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 15, 2006, with respect to the Double Patenting Rejection, have been fully considered but they are not persuasive. Amended Claims 1 and 5 do not obviate the rejection for lack of obvious teaching, as elucidated in the rejection below.

Allowable Subject Matter

2. The indicated allowability of amended Independent Claims 1 and 5 is withdrawn in view of the newly discovered reference(s) to Karker et al. (U.S. Publication 2003/0002825 A1). Rejections based on the newly cited reference(s) follow.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Art Unit: 2875

3. Claims 1 and 5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1, 8, and 10-11 of U.S. Patent No. 6,821,143 in view of Karker et al. (U.S. Publication 2003/0002825 A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because both the current application and former patent commonly recite (note claim comparison table below) a light-emitting diode having a metallic base/electrodes that are laser spot welded to a heat-radiating element, with the exception that the patent does not provide the teaching of a heat-radiating element being coated with a layer of metal. It would have been obvious to one ordinarily skilled in the art at the time of invention to provide the heat-radiating element with a layer of metal, as corroborated by the Karker teaching of laser spot welding a metal insert pad to a metal substrate having multiple layered structures incorporating a metal (i.e., copper alloys) [Paragraphs 26-28], in order to facilitate the laser spot weld/absorption of laser light energy.

Current Application: 10/808,650	U.S. Patent 6,821,143 B2
Claim 1	Claims 1, 8, and 10-11
Claim 5	Claims 1, 8, and 10-11

Claim Objections

4. Claim 15 is objected to because of the following informalities: Applicant recites the limitation, "the insulating support", in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

5. Claim 17 is objected to because of the following informalities: Applicant recites the limitation, "heat radiator", which lacks antecedent basis and should read as "heat-radiating element" to remain consistent in language. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-4 and 5, 7-8, 10, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hochstein (U.S. Patent 6428189 B1) in view of Karker et al. (U.S. Publication 2003/0002825).

7. With regard to Claims 1 and 5 & 17, Hochstein discloses a power light-emitting diode [Figures 1-4: (20, 22, 24)] having a base [Figures 1-4: (28)], which is fixed to a metallic heat-radiating element [Figures 1-3: (30); Column 2, Lines 59-61].

Hochstein does not specifically teach the base being metallic.

Though Hochstein does not specifically teach the base being mainly made from metal (i.e., copper), it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the base out of copper, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. In this case, copper is suitable for being thermally conductive, which is commonly known in the art with a heat sink/slug being attached or part of an LED.

Hochstein also does not specifically teach the heat-radiating element being coated with a layer of metal to absorb the energy of a laser light.

Karker teaches attaching an optoelectronic device, such as alignment ware [Figure 4: (114)], via laser spot welding of a metal insert pad in combination with a metal substrate having multiple layered structures, of which could incorporate copper [Paragraphs 26-28].

It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the lighting apparatus of Hochstein to incorporate the laser spot weld technique of Karker, whereby a metallic base of the LED may be efficiently and accurately attached to a heat radiating element with little to no risk of damaging the LED during manufacturing.

8. With regard to Claims 3-4 and 7-8, Hochstein in view of Karker discloses the claimed invention as cited above. Though neither Hochstein nor Karker specifically teaches each welding spot having a center, whereby said centers are distributed substantially regularly over a contour parallel to (re: Claims 3, 7) or in the vicinity/adjacent of (re: Claims 4, 8) the external perimeter of the base, it is considered obvious to one ordinarily skilled in the art that one would want to provide the welding spots on an external perimeter of the base so as to ensure maximum hold of the LED.

9. With regards to Claim 10, Hochstein in view of Karker discloses the claimed invention as cited above. It is also considered obvious that one could laser spot weld the electrodes of the LED [Hochstein: Figure 1: (26)] to conductive lugs/traces [Hochstein: Figure 1: (18)].

Allowable Subject Matter

10. Claims 9, 11-13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter:

a. With regards to Dependent Claim 9, the Applicant has sufficiently claimed and defined projections on the radiating element for centering the base of the diode. The prior art fails to teach or suggest the combination of structural elements claimed herein, specifically the projections in combination with the laser spot welding technique in attaching an LED to a heat-radiating element.

b. With regards to Dependent Claim 11, the Applicant has sufficiently claimed and defined an insulating support situated on the opposite side to the diode with respect to the radiating element. The prior art fails to teach or suggest the combination of structural elements claimed herein, specifically the insulating support comprising openings in line with the base and openings in line with electrodes from the diode for passage of the laser welding beam, and all subsequent dependent claims are allowed.

c. With regards to Dependent Claim 14, the Applicant has sufficiently claimed and defined an insulating support attaché to the heat-radiating element to which the base of the light-emitting diode is fixed. The prior art fails to teach or suggest the combination of structural elements claimed herein, specifically to an

Art Unit: 2875

opening provided in said insulating support that is in line with the base of the light-emitting diode for housing the base and providing contact with the heat-radiating element, as well as openings provided in said insulating support for electrodes from the light-emitting diode.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason M Han
Examiner
Art Unit 2875


Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800

JMH (5/10/2006)